
जल एवं अपशिष्ट जल के नमूने
लेना और परीक्षण (भौतिक एवं
रसायनिक) की विधियाँ

भाग 7 स्वाद सीमा
(दूसरा पुनरीक्षण)

Methods of Sampling and Test
(Physical and Chemical) for
Water and Waste Water

Part 7 Taste Threshold
(Second Revision)

ICS 13.060.50

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FOREWORD

This Indian Standard (Second Revision) was adopted by the Bureau of Indian Standards, after the draft finalized by the Water Quality Sectional Committee had been approved by the Chemical Division Council.

This standard was first published in 1964 and subsequently revised and splitted in various parts in 1983. In the revision if this standard a section on references is added. The requirement for selection of panel members is also given.

Taste, like odour, is one of the chemical senses. The odour sensation is stimulated by vapours without physical contact with a water sample, while taste requires contact of the taste buds with the water sample to determine its palatability. Taste is simpler than odour as there may be only four basic taste sensations: Sour, sweet, salty and bitter. The complex sensation experienced in the mouth during the act of tasting is a combination of taste, odour, temperature and feel, this combination is often called flavour. Taste tests usually have to deal with this complex combination. If a water sample contains no detectable odour and is presented at near body temperature, the resulting sensation is predominantly true taste.

It may not be assumed that a tasteless water is most desirable, it has become almost axiomatic that distilled water is less pleasant to drink than certain high quality waters. Accordingly there are two distinct purposes of taste tests. The first is to measure taste intensity by the taste threshold test. The test results are used to assess treatment required to convert a water source into a quality drinking water supply. The second purpose of taste testing is to evaluate the consumers' judgment of the quality of a drinking water. This test involves a panel evaluation of undiluted samples presented as ordinarily consumed.

For the purpose of deciding whether a particular requirement of this standard is complied with, the final value, observed or calculated, expressing the result of a test or analysis, shall be rounded off in accordance with IS 2 : 1960 'Rules for rounding off numerical values (*revised*)'. The number of significant places retained in the rounded off value should be the same as that of the specified value in this standard.

*Indian Standard***METHODS OF SAMPLING AND TEST (PHYSICAL AND CHEMICAL) FOR WATER AND WASTE WATER****PART 7 TASTE THRESHOLD***(Second Revision)***1 SCOPE**

Prescribes a method for the determination of taste threshold, for quantitative measurement of detectable taste.

1.1 This method is applicable only to water and not to waste water.

2 REFERENCE

The standard given below contains provision which, through reference in this text, constitutes provision of this standard. All standards are subject to revision, and parties to agreements based on this standard is encouraged to refer to the most recent edition.

<i>IS No.</i>	<i>Title</i>
3025 (Part 6) : 1983	Methods of sampling and test (physical and chemical) for water and waste water: Part 6 Odour threshold (<i>first revision</i>)

3 APPARATUS**3.1 Preparation of Dilutions**

The procedure of dilution is similar to that given in 7 and Table 1 of IS 3025 (Part 6).

3.2 For testing, blank and each dilution is transferred to 50-ml beaker and given to observer for tasting.

4 PROCEDURE

Prepare dilution series in the same way as given in 7 and Table 1 of IS 3025 (Part 6). Take 15 ml sample in a 50-ml beaker and pair each sample with known blank sample and present to each panelist. Ask the panelist to hold water at 40°C in as much quantity as is comfortable for several seconds and discharge it without swallowing. Instruct the subject to record whether a taste or after taste is detectable in the unknown sample. Submit the samples in an increasing order of concentration until the subject's taste threshold has been passed.

Please ensure that the following conditions are met while selecting panel members:

- a) Panel members shall not be suffering from any

ailments that affect their perception of taste, such as cold, fever etc;

- b) Panel members should not be on any medication since certain medicines may affect taste perception;
- c) Panel members shall not engage in smoking, drinking (except water), and eating from 30 min before and during the testing; and
- d) Panel members should avoid substances that have strong odour, for example, perfumes, deodorants, cosmetics; etc.

5 PRECAUTIONS

5.1 Make taste tests only for samples known to be safe for ingestion.

5.2 Do not use samples that may be contaminated with bacteria, virus, parasites, or toxic chemicals such as arsenic, dechlorinating agents or that was derived from an unaesthetic source.

5.3 To ensure that the dilutions being tested by the tester are not microbiologically contaminated, the distilled water used for dilution and the glassware must be sterilized. of glassware can be done by dry heat (hot air oven at 160°C for 60 min); and sterilization of distilled water can be done by moist heat (in an autoclave at 121°C and 15 psi pressure for 20 min).

5.4 Do not make taste tests on waste water or similar untreated effluents.

5.5 Observe all sanitary and aesthetic precautions with regard to apparatus and containers containing the sample. Practice hospital-level sanitation of these items.

5.6 Make analyses in a laboratory, free from interfering background odours. If possible provide carbon filtered air at constant temperature and humidity because without such precautions the test measures flavour and not taste.

6 CALCULATIONS

Calculate the individual threshold and threshold of panel in the same way as described in 7 and 8 of IS 3025 (Part 6).

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This Indian Standard has been developed from Doc No.: CHD 36 (10051).

Amendments Issued Since Publication

Amend No.	Date of Issue	Text Affected

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Published by BIS, New Delhi